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Project Title: Assessing Student Interviewing Competencies through Second Life

Project Dates: January 2010 - 2011

Project Checklist

_____ Statement of support from the department chair or school dean by e-mail to lhouser@iupui.edu - as a separate file not included in the proposal.

_____ Simple budget : A detailed budget is not necessary. Nevertheless, please include a brief paragraph/details indicating how you intend to spend the grant money.

_____ IRB (Institutional Review Board) approval attachment by email or hard copy to lhouser@iupui.edu or (Linda Houser, ES 3155, IUPUI) or project director statement that IRB representatives have been consulted and all requirements have been fulfilled sent to same. **Disbursement of funds will be contingent on receipt of approval by the**

Abstract

We propose a proof of concept project for using the virtual world of “Second Life” to assess student interviewing competencies. Second Life provides a platform for evaluating student abilities. A prototype for a “standardized client” will be created as a “chatbot avatar.” Students will interview the avatar in Second Life and the process will be automatically recorded. An assessment of student competency outcomes will be conducted. Focus groups and supportive survey data will be used to evaluate the efficacy of this novel approach. Results will be shared through peer review and incorporated into accreditation activities.

Describe (up to 5 double-spaced pages excluding supplemental materials) the proposed project, including the following:

Purpose of project

The purpose of this project is to investigate a cutting-edge assessment approach that can be used to teach and evaluate core competencies in social work education. This approach may work in both distributed courses and the traditional classroom. A key problem in assessing student skills at interviewing is that clients' contexts and stories vary tremendously, making evaluation against a constant or "typical" client impossible. An artificial "standardized client" would eliminate this variation because known responses in the interviewing process can be programmed.

Second Life offers an excellent platform to stage instructional interviews with artificial standardized clients and evaluate the students' capabilities. This rich three-dimensional world has the following characteristics that make this possible: First, visual environments can be easily created, making the nature and context of client settings controllable. Next, interactive "avatars" can be created and made to interact with students participating "inworld" in Second Life through their own avatars.¹ Called "chatbots," avatars that depict realistic clients can be crafted and programmed to interact with the students in authentic ways. Finally, all activities in Second Life can be automatically recorded, providing an easy way to harvest data.

Several "off the shelf" model clients have been developed by colleagues in the past, often for live role-playing scripts or computer-based instruction such as "Chipper"

¹ "Avatars" are graphic representations of the end user or participant in a virtual reality simulation. This 3D pictorial representation symbolizes the user. Avatars may be depicted as humans, cartoons, animals, or other characters. The user participates in the virtual reality simulation through manipulating the avatar. "Inworld" is the term for being connected to and actively participating in Second Life. It is a common term, similar to "login" or "logon" in email.

at the University of Michigan (<http://www.ssw.umich.edu/simulation/>). The investigators plan to use such a script and, through creating a “chatbot” avatar, develop a workable prototype simulation of a live client. We may involve students in creating a prototype script. This may be in the area of child welfare or gerontology, such as an interview with a stressed parent or an elderly person with health problems.

Once a satisfactory client script has been obtained, the investigators plan to hire a programmer to build the chatbot standardized client in Second Life. We should be able to find a talented graduate student who can do this for reasonable costs. Many programmers are also available in Second Life as well. We plan to use the A.L.I.C.E. artificial intelligence program. Following a period of prototype testing and debugging, trials with actual students will begin. A specific protocol for getting students into “Second Life” with minimal instruction will take place. This technique has already been pioneered by Dr. Vernon. Dr. Cindy Tandy has already developed an interviewing laboratory in Second Life and will make it available.

Data concerning how well the students navigated the interview with the prototype standardized client will assess how well the program performed and reveal areas for possible further development. Focus group and/or individual discussions with the students and faculty will provide formative and summative evaluations concerning how well Second Life may support student evaluation through the use of a standardized client. Of interest, Second Life is globally available. Students can be readily recruited from other schools of social work as well as at Indiana University. Three of the project directors will be providing the very first hands-on Faculty Development Institute on Second Life at the Council on Social Work’s annual conference this November, and

participating faculty can be recruited. We will seek IRB approval per the grant requirements, and are confident that an acceptable human subjects protocol can be negotiated.

The investigators comprise a unique team that is capable of undertaking this extremely innovative project. Dr. Robert Vernon has considerable expertise in the use of Second Life for instruction and has nationally presented and published in this emerging area, as has Dr. Darlene Lynch. Dr. Cindy Tandy, associate professor of social work at Valdosta State University, is equally accomplished in developing simulated environments for teaching in Second Life. She has created home, office, prison, and hospital settings in Second Life for teaching interviewing skills. Dr. Tandy is very interested in partnering in this project and will be a most welcome addition to our research team. Both Dr. Tandy and Dr. Vernon have successfully taught classes in Second Life. Dr. Philip Ouellette is an expert in distributed education, and has extensive accomplishments in interviewing evaluation in distance education settings. Drs. Vernon, Lynch and Ouellette are faculty in the IU School of Social Work. The entire team is at the forefront of using technology in social work education and evaluation.

Intended outcomes of the project

This pilot project will help determine if using virtual worlds for student assessment has merit in concert with the social work profession's Educational Policy and Accreditation Standards. The resulting prototype will serve as a beginning model for further development if this project produces successful results. A developed prototype with evaluative results will be used to leverage significant additional funding should this proof of concept be successful.

Assessment method(s) that will be used in the project. (These methods might include end-of-program exams, paper or electronic portfolios, surveys, focus groups, interviews, and other measures.)

Qualitative and quantitative data will be recovered. Second Life is unusually suited to gathering qualitative data through two mechanisms. First, complete transcripts of interactions between avatars can be easily recorded through a few simple keystrokes. Second, motion pictures of meetings between avatars can also be recorded “inworld” through “machinima,” a technique for making movies in virtual worlds. Quantitative data will be gathered through online surveys using “Question Pro.” Follow-up interviews with participating students and faculty will also take place as needed to help determine the efficacy of this evaluative approach.

Data analysis to be employed

Our methodology will include basic statistics regarding student outcomes and also summative results of student and faculty surveys regarding assessment of the viability of this approach. Qualitative data will be explored for themes and specific factors for further investigation.

Evaluation and dissemination of the results. Please note a final written report must be submitted within 30 days of completion of the project. Please forward any published articles or conference papers resulting from the assessment project to the Program Review and Assessment Committee at tbanta@iupui.edu.

The results of this project will be first shared with PRAC, our school’s Bachelor Social Work Curriculum Committee, the Masters Social Work Curriculum Committee and our Online Steering Committee for discussion and possible incorporation into competency evaluation.

We also anticipate submitting our findings for presentation at one national social work education conference. We may also submit findings for presentation at the annual

Second Life Community Conference, Educational Track. Additional juried articles may be forthcoming, depending on results. Two of the investigators currently have the very first article on using Second Life for social work education accepted for publication (Vernon, Lewis, & Lynch, in press.)

Should this inquiry prove successful the investigators plan to seek major funding for the possible development of additional client avatars that are more sophisticated through the use of more advanced text-mining programming. Speculative, this may become a major grant initiative through perhaps the McArthur Foundation or a similar source for development capital. But first a proof of concept is necessary and we need your help.

Details on intended use of findings for program improvement

Our work will provide supportive data for the school's reaffirmation of accreditation in 2012. Findings will be incorporated into our Self Study for the Council on Social Work Education. Our school has earned a national reputation for curriculum and teaching evaluation. This project will further enhance our reputation and encourage further innovation in curriculum evaluation and measurement.



Sample illustration of a client and student interview “inworld.”

Budget

We anticipate spending \$2500 for avatar design and programming that will be managed by the project investigators. The actual money will be spent on programming. We anticipate three deliverables. The first will be the development of a suitable chatbot-type of avatar. Following this, the avatar will be programmed with an interactive script based on a specific client problem. Next, the chatbot will be tested for workable behaviors. Finally, the avatar will be debugged and/or modified as needed.

IUPUI's Principles of Undergraduate Learning

This project directly addresses the Principles. First, critical thinking is an important dimension of this project as students must analyze the contents of the interview towards understanding the credibility and context of the information provided. Communication is also directly addressed because students will analyze, interpret, and comprehend information sources mediated through technology. Finally, this project directly includes the development and measurement of professional skills and competencies.

Reference

Vernon, R., Lewis, L., & Lynch, D. (in press). Virtual Worlds and Social Work Education: Potentials for “Second Life. *Advances in Social Work*.

Thank you for your consideration!